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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/724,569	11/28/2000	John P. Anderson	015270-006446US	6102

20350 7590 12/29/2004

TOWNSEND AND TOWNSEND AND CREW, LLP
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EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER

WALICKA, MALGORZATA A

ART UNIT PAPER NUMBER

1652

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/724,569

Applicant(s)

ANDERSON ET AL.

Examiner

Malgorzata A. Walicka

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 0704.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 56-77 is/are pending in the application.
- 4a) Of the above claim(s) 59 and 60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 56-58 and 61-77 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/11/02</u> . | 6) <input checked="" type="checkbox"/> Other: <u>See Continuation Sheet</u> . |

Continuation of Attachment(s) 6). Other: sequence alignments used in 102 rejections.

The Response to Restriction Requirement filed Dec. 7, 2004, and Supplemental is acknowledged. The Amendments to the claims and specification have been entered as requested. Claims 1-55 and 78-131 are canceled. Claims 56-77 are pending in the application and claims 56-58 and 61-77 are the subject of this Office Action; claims 59-60 as directed to non elected species and are withdrawn from examiner's consideration.

DETAILED ACTION

1. Restriction/election

Applicant's election, without traverse, of Group V, claims 56-77 is acknowledged. In response to requirement of election of species Applicant elected polypeptides having an amino acid sequence starting with amino acid residues No. 46 of SEQ ID NO: 2.

Upon the allowance of a generic claim, Applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Claims 59 and 60 are directed to nucleic acid molecules encoding polypeptides that do not start with the 46th amino acid of SEQ ID NO: 2. Thus these claims do not read on the elected species and are not under current examination.

2. Objections

2.1. Oath

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The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02. It was not executed in accordance with either 37 CFR 1.66 or 1.68.

The oath or declaration is defective because: there is lack of date of signature of the inventor McConlogue on page 4 of 4.

2.1. Specification

Description of Fig. 5 on page 8 is objected to, because it is confusing about the term proenzyme. The description states that SEQ ID NO: 43 is "the proenzyme region corresponding to amino acids 46-501", whereas in the same description Applicant write that the putative pro- region consists of residues 22-45; SEQ ID NO: 47. Thus residues 46-501 represent the mature enzyme and not proenzyme. Please correct the description of Fig. 5.

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors in the specification of which applicant may become aware.

3. Rejections

3.1. 35 USC, section 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 72-77 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are rejected as dependent on the canceled claim 55. The claims cannot be examined.

3.2. 35 USC, section 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

1. A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 56-58 and 61-68 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent No. 6,319,689, issued to Powell et al. on Nov. 20, 2001, with priority date Jan. 28, 1997.

The claims are directed:

claim 56-58 to an isolated nucleic acid, comprising a sequence of nucleotides that encode a beta-secretase that is at least 95% identical to a

protein selected from the group consisting of SEQ ID NO: 43, 58 and 71, or a complementary sequence specifically excluding a nucleic acid encoding a protein having the sequence SEQ ID NO: 2;

claims 61-67 to an expression vector and heterologous cells transfected with nucleic acid of claim 56;

claims 68 to recombinant production of beta secretase encoded by nucleic acid of claim 56 and purification of the produced protein on an affinity matrix.

Powell discloses the full amino acid sequence, i.e., 501 amino acids, of human beta-secretase that differs from the full amino acid sequence of the instant invention in residue 130, i.e. Powell et al.'s sequence has glutamic acid in that position and SEQ ID NO: 2 of the instant invention has in that position valine. In the patent the sequence is also identified by SEQ ID NO: 2. SEQ ID NO: 43, 58 and 71 of the instant application are more than 99% identical to the fragments of beta secretase of SEQ ID NO: 2 of the patent, wherein said fragments consist of amino acids 46-501, 46-452 and 46-419 of SEQ SEQ ID NO: 2 of the patent. Powell discloses nucleic acid molecule of SEQ ID NO: 1 encoding beta-secretase of SEQ ID NO: 2, thus Powell et al. disclose nucleic acid molecules having limitations recited in claims 56-58; see the alignment of SEQ ID NO: 43 and 42 with that of Powell's. Powell et al. teach also expression vectors, host cells and recombinant production of beta-secretase; see column 14, subtitle Vectors,

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Host Cells Expression. In column 15, line 10 Powell et al. teach purification of the expressed enzyme using, among others, affinity chromatography.

Furthermore the following rejection over prior art is applicable.

2. A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

In addition to rejection over Powell and al.'s patent, claims 56-58, 61-69 and 71 are rejected under 35 U.S.C. 102(g) as being anticipated by US patent No. 6, 420, 534, issued to Gurney et al. on July 16, 2002, with priority date September 24, 1998.

Gurney discloses the full amino acid sequence, i.e., 501 amino acids, of mouse beta-secretase identified by SEQ ID NO: 8, which is 98.8% identical to SEQ ID NO: 43 of the instant application; see the enclosed sequence alignment of the amino acid and

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nucleotide sequences. Gurney et al. teach vectors, host cells and expression of the disclosed sequences in several cell systems; see columns 23-25 and examples 9, 10 and 11 of the patent. The patent teaches also several methods of purification of the beta-secretase, including affinity chromatography using polyclonal and monoclonal antibodies; see column 23, first paragraph. Thus, Gurney et al. teach all the limitations of claims 56-58, 61-69 and 71.

4. Conclusion

All claims are rejected. No claim is in condition for allowance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Malgorzata A. Walicka whose telephone number is (571) 272-0944. The examiner can normally be reached on Monday-Friday from 10:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy, can be reached on (571) 272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should


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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Malgorzata A. Walicka, Ph.D.

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Patent Examiner


REBECCA E. PROUTY
PRIMARY EXAMINER
GROUP 1800
1652

Qy 301 LYMGVNTNOSFRITILPOOYLRPVEDVATSDQDCYKFAISQSSSTGTVMGAVIMEGYVY 360
Db 346 LYLMGEVNTNOSFRITILPOOYLRPVEDVATSDQDCYKFAISQSSSTGTVMGAVIMEGYVY 405
Qy 361 FDRARKRIGFAVSACHVHDEFRTAAVEGPEVTLDMEDCGYNIPQTDSTLMTIAYVMAAI 420
Db 406 FDRARKRIGFAVSACHVHDEFRTAAVEGPEVTLDMEDCGYNIPQTDSTLMTIAYVMAAI 465
Qy 421 CALFNLPLCLMWCMRCRLCRLQHQHDFADDISLLK 456
Db 466 CALFNLPLCLMWCMRCRLCRLQHQHDFADDISLLK 501

RESULT 2
US-09-348-367D-4
; Sequence 4, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES
; FILE OF INVENTION: THEREOF
; FILE REFERENCE: 29915/6280H
; CURRENT APPLICATION NUMBER: US/09/548,367D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-348-367D-4

Query Match 100.0%; Score 2419; DB 4; Length 501;
Best Local Similarity 100.0%; Pred. No. 1.le-251;
Matches 456; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ETDEEPEEPPGRGSGFVEMVNLGRKSGGYVYVEMTGVSPPTLNLVDTGSSNFVAGAAP 60
Db 46 ETDEEPEEPPGRGSGFVEMVNLGRKSGGYVYVEMTGVSPPTLNLVDTGSSNFVAGAAP 105
Qy 61 HPFLHRYVQRLSSTYRDLRGYVVPYVTOGKWEGLGTLVSIHPGPNVTVRANIAAITE 120
Db 106 HPFLHRYVQRLSSTYRDLRGYVVPYVTOGKWEGLGTLVSIHPGPNVTVRANIAAITE 165
Qy 121 SDKFFINGSNMEGILGLAYAEIARPDSDLEPFFDSLVKQTHVNPFLSLQCCGAGFPPLNQS 180
Db 166 SDKFFINGSNMEGILGLAYAEIARPDSDLEPFFDSLVKQTHVNPFLSLQCCGAGFPPLNQS 225
Qy 181 EVLASVSGSMIIGGIDHSLYTGSLWYTPIRREWYEVIIVRVEINGQDLKMDCKEYNYDK 240
Db 236 EVLASVSGSMIIGGIDHSLYTGSLWYTPIRREWYEVIIVRVEINGQDLKMDCKEYNYDK 285
Qy 241 SIVDSGTTNLRPLPKKVEAAVKSIAASSTKFPDGFNLGSQLVCMQAGTTPNNIFPVIS 300
Db 286 SIVDSGTTNLRPLPKKVEAAVKSIAASSTKFPDGFNLGSQLVCMQAGTTPNNIFPVIS 345
Qy 301 LYLMGEVNTNOSFRITILPOOYLRPVEDVATSDQDCYKFAISQSSSTGTVMGAVIMEGYVY 360
Db 346 LYLMGEVNTNOSFRITILPOOYLRPVEDVATSDQDCYKFAISQSSSTGTVMGAVIMEGYVY 405
Qy 361 FDRARKRIGFAVSACHVHDEFRTAAVEGPEVTLDMEDCGYNIPQTDSTLMTIAYVMAAI 420
Db 406 FDRARKRIGFAVSACHVHDEFRTAAVEGPEVTLDMEDCGYNIPQTDSTLMTIAYVMAAI 465

Qy 421 CALFNLPLCLMWCMRCRLCRLQHQHDFADDISLLK 456
Db 466 CALFNLPLCLMWCMRCRLCRLQHQHDFADDISLLK 501

RESULT 3
US-09-009-191-2
; Sequence 2, Application US/09009191
; Patent No. 6319689
; GENERAL INFORMATION:
; APPLICANT: POWELL, DAVID
; APPLICANT: CHAPMAN, CONRAD
; APPLICANT: MURPHY, KAY
; APPLICANT: SMITH, TRUDI
; TITLE OF INVENTION: ASP2
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: RATNER & PRESTIA
; STREET: P.O. BOX 980
; CITY: VALLEY FORGE
; STATE: PA
; COUNTRY: USA
; ZIP: 19482
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FASTSEQ for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/009,191
; FILING DATE: 20-JAN-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: UK 9701684.4
; FILING DATE: 28-JAN-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: PRESTIA, PAUL F
; REGISTRATION NUMBER: 23,031
; REFERENCE/DOCKET NUMBER: GH-70368
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 610-407-0700
; TELEFAX: 610-407-0701
; TELEX: 846169
; INFORMATION FOR SEQ ID NO: 2:
; LENGTH: 501 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-009-191-2

Query Match 99.8%; Score 2413; DB 4; Length 501;
Best Local Similarity 99.8%; Pred. No. 4.8e-251;
Matches 455; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 ETDEEPEEPPGRGSGFVEMVNLGRKSGGYVYVEMTGVSPPTLNLVDTGSSNFVAGAAP 60
Db 46 ETDEEPEEPPGRGSGFVEMVNLGRKSGGYVYVEMTGVSPPTLNLVDTGSSNFVAGAAP 105
Qy 61 HPFLHRYVQRLSSTYRDLRGYVVPYVTOGKWEGLGTLVSIHPGPNVTVRANIAAITE 120
Db 106 HPFLHRYVQRLSSTYRDLRGYVVPYVTOGKWEGLGTLVSIHPGPNVTVRANIAAITE 165
Qy 121 SDKFFINGSNMEGILGLAYAEIARPDSDLEPFFDSLVKQTHVNPFLSLQCCGAGFPPLNQS 180
Db 166 SDKFFINGSNMEGILGLAYAEIARPDSDLEPFFDSLVKQTHVNPFLSLQCCGAGFPPLNQS 225
Qy 181 EVLASVSGSMIIGGIDHSLYTGSLWYTPIRREWYEVIIVRVEINGQDLKMDCKEYNYDK 240
Db 226 EVLASVSGSMIIGGIDHSLYTGSLWYTPIRREWYEVIIVRVEINGQDLKMDCKEYNYDK 285
Qy 241 SIVDSGTTNLRPLPKKVEAAVKSIAASSTKFPDGFNLGSQLVCMQAGTTPNNIFPVIS 300

Db 286 SIVDSGTTNLRPKKVFEEAAVKSKAASSTKFPDGFMLGSQLVCWQAGTTPNIFPVIS 345
QY 301 LYLMGEVNTQSFRTITLPOQYLRPVEDVATSDQDCYKFAISQSSTGTVMGAVIMEGFYV 360
Db 346 LYLMGEVNTQSFRTITLPOQYLRPVEDVATSDQDCYKFAISQSSTGTVMGAVIMEGFYV 405
QY 361 FDRARKRIGFAVSACHVDEFTAAVEGPFVTLDMEDCGYNIPTDDESTLTMTIAYVMAAI 420
Db 406 FDRARKRIGFAVSACHVDEFTAAVEGPFVTLDMEDCGYNIPTDDESTLTMTIAYVMAAI 465
QY 421 CALFMLPLCLMVQWRCRLRCLRQOHDDFADDISLLK 456
Db 466 CALFMLPLCLMVQWRCRLRCLRQOHDDFADDISLLK 501

RESULT 4
US-09-713-158-2
; Sequence 2, Application US/09713158
; Patent No. 6361975
; GENERAL INFORMATION:
; APPLICANT: ZHU, YUAN
; APPLICANT: LI, XIAOTONG
; APPLICANT: POWELL, DAVID J.
; APPLICANT: CHRISTIE, GARY
; TITLE OF INVENTION: MOUSE ASPARTIC SECRETASE-2 (MASP-2)
; FILE REFERENCE: GP-70660
; CURRENT APPLICATION NUMBER: US/09713.158
; PRIOR FILING DATE: 2000-11-15
; PRIOR APPLICATION NUMBER: 60/165,800
; PRIOR FILING DATE: 1999-11-16
; NUMBER OF SEQ ID NOS: 2
; SOFTWARE: FastSeq for Windows version 3.0
; SEQ ID NO 2
; LENGTH: 501
; TYPE: PRT
; ORGANISM: MUS MUSCULUS
US-09-713-158-2

Query Match 98.8%; Score 2390; DB 4; Length 501;
Best Local Similarity 98.2%; Pred. No. 1.5e-248;
Matches 448; Conservative 4; Mismatches 4; Indels 0; Gaps 0;
QY 1 ETDEEPEEPCRGSGFVEMVDNLRGKSGQGYVYVEMTVGSPPTLNILVDTGSSNFVAGCAAP 60
Db 46 ETDEEPEEPCRGSGFVEMVDNLRGKSGQGYVYVEMTVGSPPTLNILVDTGSSNFVAGCAAP 105
QY 61 HPFLHRYTORQLSSTYRDLRKGVYVPTGKWEGLGTLVSIPIHGPNTVVRANIAITE 120
Db 106 HPFLHRYTORQLSSTYRDLRKGVYVPTGKWEGLGTLVSIPIHGPNTVVRANIAITE 165
QY 121 SDRFFINGSNWEGLGLAYAEIARPDSDSLEPFEDSLVKQTHVFNLFSLQLCGAGFPPLNQS 180
Db 166 SDRFFINGSNWEGLGLAYAEIARPDSDSLEPFEDSLVKQTHVFNLFSLQLCGAGFPPLNQT 225
QY 181 EYLASVGGSMIIGGIDHSLYTGSLWYTPIRREWYEVIIVRVEINGQDLKMDCKEYNYDK 240
Db 226 EYLASVGGSMIIGGIDHSLYTGSLWYTPIRREWYEVIIVRVEINGQDLKMDCKEYNYDK 285
QY 241 SIVDSGTTNLRPKKVFEEAAVKSIKAASSTKFPDGFMLGSQLVCWQAGTTPNIFPVIS 300
Db 286 SIVDSGTTNLRPKKVFEEAAVKSIKAASSTKFPDGFMLGSQLVCWQAGTTPNIFPVIS 345
QY 301 LYLMGEVNTQSFRTITLPOQYLRPVEDVATSDQDCYKFAISQSSTGTVMGAVIMEGFYV 360
Db 346 LYLMGEVNTQSFRTITLPOQYLRPVEDVATSDQDCYKFAISQSSTGTVMGAVIMEGFYV 405
QY 361 FDRARKRIGFAVSACHVDEFTAAVEGPFVTLDMEDCGYNIPTDDESTLTMTIAYVMAAI 420
Db 406 FDRARKRIGFAVSACHVDEFTAAVEGPFVTLDMEDCGYNIPTDDESTLTMTIAYVMAAI 465
QY 421 CALFMLPLCLMVQWRCRLRCLRQOHDDFADDISLLK 456
Db 466 CALFMLPLCLMVQWRCRLRCLRQOHDDFADDISLLK 501

RESULT 6
US-09-548-367D-8
; Sequence 8, Application US/09548367D
; Patent No. 6440698
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.

Db 466 CALFMLPLCLMVQWRCRLRCLRQOHDDFADDISLLK 501
RESULT 5
US-09-548-372D-8
; Sequence 8, Application US/09548372D
; Patent No. 6420534
; GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: 29915/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; CURRENT FILING DATE: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 09/404,133
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: PCT/US99/20881
; PRIOR FILING DATE: 1999-09-23
; PRIOR APPLICATION NUMBER: US 60/101,594
; PRIOR FILING DATE: 1998-09-24
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 501
; TYPE: PRT
; ORGANISM: Mus musculus
US-09-548-372D-8
Query Match 98.8%; Score 2390; DB 4; Length 501;
Best Local Similarity 98.2%; Pred. No. 1.5e-248;
Matches 448; Conservative 4; Mismatches 4; Indels 0; Gaps 0;
QY 1 ETDEEPEEPCRGSGFVEMVDNLRGKSGQGYVYVEMTVGSPPTLNILVDTGSSNFVAGCAAP 60
Db 46 ETDEEPEEPCRGSGFVEMVDNLRGKSGQGYVYVEMTVGSPPTLNILVDTGSSNFVAGCAAP 105
QY 61 HPFLHRYTORQLSSTYRDLRKGVYVPTGKWEGLGTLVSIPIHGPNTVVRANIAITE 120
Db 106 HPFLHRYTORQLSSTYRDLRKGVYVPTGKWEGLGTLVSIPIHGPNTVVRANIAITE 165
QY 121 SDRFFINGSNWEGLGLAYAEIARPDSDSLEPFEDSLVKQTHVFNLFSLQLCGAGFPPLNQS 180
Db 166 SDRFFINGSNWEGLGLAYAEIARPDSDSLEPFEDSLVKQTHVFNLFSLQLCGAGFPPLNQT 225
QY 181 EYLASVGGSMIIGGIDHSLYTGSLWYTPIRREWYEVIIVRVEINGQDLKMDCKEYNYDK 240
Db 226 EYLASVGGSMIIGGIDHSLYTGSLWYTPIRREWYEVIIVRVEINGQDLKMDCKEYNYDK 285
QY 241 SIVDSGTTNLRPKKVFEEAAVKSIKAASSTKFPDGFMLGSQLVCWQAGTTPNIFPVIS 300
Db 286 SIVDSGTTNLRPKKVFEEAAVKSIKAASSTKFPDGFMLGSQLVCWQAGTTPNIFPVIS 345
QY 301 LYLMGEVNTQSFRTITLPOQYLRPVEDVATSDQDCYKFAISQSSTGTVMGAVIMEGFYV 360
Db 346 LYLMGEVNTQSFRTITLPOQYLRPVEDVATSDQDCYKFAISQSSTGTVMGAVIMEGFYV 405
QY 361 FDRARKRIGFAVSACHVDEFTAAVEGPFVTLDMEDCGYNIPTDDESTLTMTIAYVMAAI 420
Db 406 FDRARKRIGFAVSACHVDEFTAAVEGPFVTLDMEDCGYNIPTDDESTLTMTIAYVMAAI 465
QY 421 CALFMLPLCLMVQWRCRLRCLRQOHDDFADDISLLK 456
Db 466 CALFMLPLCLMVQWRCRLRCLRQOHDDFADDISLLK 501

Query Match 78.2%; Score 1835.4; DB 4; Length 2370;
Best Local Similarity 99.1%; Pred. No. 0;
Matches 1856; Conservative 0; Mismatches 16; Indels 1; Gaps 1;

QY 477 GCGAGCTTTGGAGATGGTGGACAACTGAGGGGCAAGTCGGGCGAGGGCTACTACGTG 536
DB 1 GCGAGCTTTGGAGATGGTGGACAACTGAGGGGCAAGTCGGGCGAGGGCTACTACGTG 60

QY 537 GAGATGACCGTGGGAGAGCCCGCCGAGAGCGCTCAACATCTCTGGTGGATACAGGAGCAGT 596
DB 61 GAGATGACCGTGGGAGAGCCCGCCGAGAGCGCTCAACATCTCTGGTGGATACAGGAGCAGT 120

QY 597 AACTTTGAGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGG 656
DB 121 AACTTTGAGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGG 180

QY 657 TCCAGACATACCGGAGCTCCGGAGGGTGTGTATGTCCTTACACCGAGGGCAAGTGG 716
DB 181 TCCAGACATACCGGAGCTCCGGAGGGTGTGTATGTCCTTACACCGAGGGCAAGTGG 240

QY 717 GAAGGGAGCTGGGACCGAGCTGTGAAGCATCCCGCCATGGCCCAAGCTCACTGTGGCT 776
DB 241 GAAGGGAGCTGGGACCGAGCTGTGAAGCATCCCGCCATGGCCCAAGCTCACTGTGGCT 300

QY 777 GCGAATTTGCTGCTCACTCACTCACTCACTCACTCACTCACTCACTCACTCACTCACT 836
DB 301 GCGAATTTGCTGCTCACTCACTCACTCACTCACTCACTCACTCACTCACTCACTCACT 360

QY 837 GCGATCTGGGCTGGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 896
DB 361 GCGATCTGGGCTGGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 420

QY 897 TTTGACTCTCTGTTAAAGAGACCCAGCTTCCCAACCTCTTCTCCCTCGAGCTTTTGGT 956
DB 421 TTTGACTCTCTGTTAAAGAGACCCAGCTTCCCAACCTCTTCTCCCTCGAGCTTTTGGT 480

QY 957 GCTGCTCTCCCGCTCAAGCAGCTCAAGTGTGCTGGCTCTGTCGGAGGGAGCATGATCAT 1016
DB 481 GCTGCTCTCCCGCTCAAGCAGCTCAAGTGTGCTGGCTCTGTCGGAGGGAGCATGATCAT 540

QY 1017 GCGAGTATCGACACTCGCTGACAGGAGCTGCTGCTGATACACCCATCCCGGGGAG 1076
DB 541 GCGAGTATCGACACTCGCTGACAGGAGCTGCTGCTGATACACCCATCCCGGGGAG 600

QY 1077 TGGTATTATGAGGTGATCATTTGGGGTGGAGATCAATGGACAGATCTGAAATGGAC 1136
DB 601 TGGTATTATGAGGTGATCATTTGGGGTGGAGATCAATGGACAGATCTGAAATGGAC 660

QY 1137 TCGAAGGAGTACAACTATGACAAGAGCATTTGGAGAGTGGCAGCACCACCACTTCTGTTG 1196
DB 661 TCGAAGGAGTACAACTATGACAAGAGCATTTGGAGAGTGGCAGCACCACCACTTCTGTTG 720

QY 1197 CCCAAGAAAGTCTTTGAAAGTGCAGTCAATCCATCAAGGAGCTCTCCACGAGAG 1256
DB 721 CCCAAGAAAGTCTTTGAAAGTGCAGTCAATCCATCAAGGAGCTCTCCACGAGAG 780

QY 1257 TTCCTGTATGTTCTGGCTAGGAGAGAGCTGCTGCTGCAAGCAGGACACACCTTC 1316
DB 781 TTCCTGTATGTTCTGGCTAGGAGAGAGCTGCTGCTGCAAGCAGGACACACCTTC 840

QY 1317 TGGAAATTTTCCCGAGTCACTCACTCACTCACTCACTCACTCACTCACTCACTCACTTC 1376
DB 841 TGGAAATTTTCCCGAGTCACTCACTCACTCACTCACTCACTCACTCACTCACTTC 900

QY 1377 CCATCAACCATCTTCCCGAGCAATACCTGCGGCGAGTGGAGAGTGGCCACAGTCCCAA 1436
DB 901 CCATCAACCATCTTCCCGAGCAATACCTGCGGCGAGTGGAGAGTGGCCACAGTCCCAA 960

QY 1437 GAGGAGTGTACAAAGTTTCCCATCTCACAGTCATCCACGGGAGCTGTTATGGAGCTGTT 1496
DB 961 GAGGAGTGTACAAAGTTTCCCATCTCACAGTCATCCACGGGAGCTGTTATGGAGCTGTT 1020

QY 1497 ATCATGGAGGGCTTCTACGTTGCTTGTATCGGCGCCGAAACGAATTTGGCTTTCTGTC 1556
DB 1021 ATCATGGAGGGCTTCTACGTTGCTTGTATCGGCGCCGAAACGAATTTGGCTTTCTGTC 1080

QY 1557 AGCGCTTCCCATGTGTCAGATGAGTTAGGAGCGGAGCGGTGGAGAGGCGCTTTTGTGTCAC 1616
DB 1081 AGCGCTTCCCATGTGTCAGATGAGTTAGGAGCGGAGCGGTGGAGAGGCGCTTTTGTGTCAC 1140

QY 1617 TTGGACATGGAAAGACTGTGGCTTACAACTTCCACAGACAGATGAGTCAACCTTCATGACC 1676
DB 1141 TTGGACATGGAAAGACTGTGGCTTACAACTTCCACAGACAGATGAGTCAACCTTCATGACC 1200

QY 1677 ATAGCCTATGTCATGCTGCCATCTGCCCTCTTCTATGCTGCCACTCTGCCCTCATGGT 1736
DB 1201 ATAGCCTATGTCATGCTGCCATCTGCCCTCTTCTATGCTGCCACTCTGCCCTCATGGT 1260

QY 1737 TGTCAAGTGGCGCTGCTCGGCTCGCTGGCCAGACAGCATGATGCTTTGCTGATGACATC 1796
DB 1261 TGTCAAGTGGCGCTGCTCGGCTCGCTGGCCAGACAAATGAGTGAATTTGCTGATGACATC 1320

QY 1797 TCCCTGCTGAAGTGGAGGGCCCATGGCCAGAAATAGAGATTCCCTT-GGACCAACCT 1855
DB 1321 TCCCTGCTGAAGTGGAGGGCCCATGGCCAGAAATAGAGATTCCCTTGGGACCAACCT 1380

QY 1856 CCGTGGTTCACTTTGCTCACAAGTAGGACACAGATGSCACTGTGGCCAGACGACCTC 1915
DB 1381 CCGTGGTTCACTTTGCTCACAAGTAGGACACAGATGSCACTGTGGCCAGACGACCTC 1440

QY 1916 AGGACCTCTCCCGACCCCAATGCTGCTGCTTGTAGGAGGAAAGGCTGGCAAG 1975
DB 1441 AGGACCTCTCCCGACCCCAATGCTGCTGCTTGTAGGAGGAAAGGCTGGCAAG 1500

QY 1976 TGGGTTCCAGGAGCTGTACCTGTAGGAAACAGAAAGAGAGAGAGAGAGAGAGAGAG 2035
DB 1501 TGGGTTCCAGGAGCTGTACCTGTAGGAAACAGAAAGAGAGAGAGAGAGAGAGAGAG 1560

QY 2036 CGGGAATACTCTTGTGTCACCTCAAAATTTAAGTCGGGAAATTTCTGCTGTTGAAACTTCAG 2095
DB 1561 CGGGAATACTCTTGTGTCACCTCAAAATTTAAGTCGGGAAATTTCTGCTGTTGAAACTTCAG 1620

QY 2096 CCTCAACCTTTGTCACCACTTCTTAAATTTCTCAACCCAAAGTATTCTTTCTTTCTT 2155
DB 1621 CCTCAACCTTTGTCACCACTTCTTAAATTTCTCAACCCAAAGTATTCTTTCTTTCTT 1680

QY 2156 AGTTTCAGAGTACTGGCATCACAGGCTTACCTTGGCGGTGTCCTGTTGTTACCT 2215
DB 1681 AGTTTCAGAGTACTGGCATCACAGGCTTACCTTGGCGGTGTCCTGTTGTTACCT 1740

QY 2216 GCGAG 2275
DB 1741 GCGAG 1800

QY 2276 GTTTCCTATTTCCTTTAGAGAGAGGAGCTGTATAAACAAGCCTTAACATTGGTGCAAGAT 2335
DB 1801 GTTTCCTATTTCCTTTAGAGAGAGGAGCTGTATAAACAAGCCTTAACATTGGTGCAAGAT 1860

QY 2336 TGCCTCTTGAATTT 2348
DB 1861 TGCCTCTTGAATTT 1873

RESULT 7
US-09-548-372D-7
; Sequence 7, Application US/09548372D
; Patent No. 6420534
GENERAL INFORMATION:
; APPLICANT: GURNEY ET AL.
; TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND
; FILE OF INVENTION: THEREOF
; FILE REFERENCE: 29315/62801
; CURRENT APPLICATION NUMBER: US/09/548,372D
; PRIOR APPLICATION NUMBER: 2000-04-12
; PRIOR APPLICATION NUMBER: US 60/155,493

